

RISK MANAGEMENT GUIDE

for
Mountain Operations



USARAK

***Northern Warfare
Training Center***

01 March 2014

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MEMORANDUM FOR RECORD

01 March 2014

SUBJECT: Composite Risk Management (CRM) for Mountain Operations

1. Summary. This pamphlet gives leaders at all levels a pocket reference for implementing the Composite Risk Management process in order to develop safe and effective mountain training plans, exercises and operations. FM 5-19, Composite Risk Management, was used to develop this pamphlet.
2. Soldiers who attend a USARAK Northern Warfare Training Center (NWTC) course will receive training on the CRM process and integrate CRM into all aspects of training. The lesson plan pertaining to this pamphlet is available on the NWTC website, www.wainwright.army.mil/nwtc/. The pamphlet includes the following:
 - a. A brief overview of the CRM process.
 - b. NWTC developed matrix for identifying and assessing mountain hazards in order to determine initial risk level.
 - c. DA Form 7566, Composite Risk Management Worksheet.
 - d. Examples of completed CRM worksheets utilized by NWTC for courses. These worksheets serve as a baseline for certain training activities, but do not serve as a substitute for thorough CRM.
 - e. Planning considerations for Cold Weather Operations and Training.
 - f. Wind Chill Chart.
 - g. Nine Line MEDEVAC checklist.
 - h. Blank copies of DA Form 7566 for use during mountain training and operations.
3. Applicability. This pamphlet applies to units and activities assigned or attached to USARAK. This pamphlet supersedes all previous versions of the NWTC Risk Management for Mountain Operations.

APVR-WNW

SUBJECT: Composite Risk Management (CRM) for Mountain Operations

4. Interim Changes. Interim changes to this pamphlet are not official unless they are authenticated by the director of information management. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

5. Suggested improvements. The proponent agency of this pamphlet is USARAK NWTC, Ft. Wainwright, Alaska, www.wainwright.army.mil/nwtc/. Users are invited to send comments and suggested improvements on Department of the Army (DA) Form 2028, Recommended Changes to Publications and Blank Forms, directly to APVR-WNW.

MARK E. ADAMS
LTC, FA
Commandant

SECTION I

Composite Risk Management for Mountain Training and Operations

Composite Risk Management

Step 1: Identify hazards:

a. METT-TC provides the framework to identify hazards. In a garrison environment or for off-duty activities consider:

- Activity (Mission)
- Disrupters (Enemy)
- Terrain and Weather
- People (Troops)
- Time
- Legal considerations (Civil considerations)

b. You can also use regulations, accident data, risk assessment matrices, AAR's, experience, subject matter experts, etc.

Step 2: Assess the hazards:

- Assess the probability of the event or occurrence.
- Estimate the expected result or severity of an event or occurrence.
- Determine the specified level of risk for a given probability and severity using the standard risk assessment matrix.

Risk Assessment Matrix						
Severity		Probability				
		Frequent A	Likely B	Occasional C	Seldom D	Unlikely E
Catastrophic		E	E	H	H	M
Critical		E	H	H	M	L
Marginal		H	M	M	L	L
Negligible		M	L	L	L	L
E –Extremely High		H – High		M – Moderate		L - Low

Step 3: Develop Controls:

- a. Effective control measures address WHO, WHAT, WHEN, WHERE and HOW.
- b. Reassess the risk after controls are in place to determine residual risk level.
- c. Make risk decisions – Ask yourself what constitutes an acceptable level of risk for the mission or activity?
- d. Involve the appropriate level of command based upon the residual risk level:

Risk Level	Low	Moderate	High	Extremely High
Who can approve the mission or activity?	Company Commander	Battalion Commander	Brigade Commander	Commanding General

Step 4: Implement Controls:

- a. Ensure controls are converted into clear and simple execution orders.
- b. Controls must be understood by all.

Step 5: Supervise and Evaluate:

- a. Implement and enforce risk controls to standard.
- b. Supervise the process – this is also a control measure.
- c. Evaluate and make adjustments as necessary.

NOTE: Record the CRM process on DA Form 7566 available at <http://www.apd.army.mil/>

Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK			2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY								
a. LAST NAME			b. RANK		c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Additional space for entries in Items 5 through 11 is provided on Page 2.								
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>) <div style="display: flex; justify-content: space-around; align-items: center;"> <input style="width: 30px; height: 20px;" type="checkbox"/> LOW <input style="width: 30px; height: 20px;" type="checkbox"/> MODERATE <input style="width: 30px; height: 20px;" type="checkbox"/> HIGH <input style="width: 30px; height: 20px;" type="checkbox"/> EXTREMELY HIGH </div>								
14. RISK DECISION AUTHORITY								
a. LAST NAME			b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

SECTION II

Risk Management Examples for Select Mountain Training Events

This section contains example CRM worksheets for some of the mountain training conducted during courses at the Northern Warfare Training Center. They are not all inclusive and do not negate the need to apply the CRM process to training or operations in your unit.

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK: General mountaineering safety			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
	Head injury from rock fall	M	Wear helmet for all outdoor events during BMC Yell "ROCK" if rock fall is spotted to warn others Route selection	L	Follow established safety procedures and guidelines	All enforce this standard	
	Injuries to hand and fingers	M	Remove watches, rings, jewelry for all outdoor events during BMC	L	Follow established safety procedures and guidelines	All enforce this standard	
	Dehydration	M	Carry two quarts of water at all times	L	Follow established safety procedures and guidelines	All enforce this standard	
	Lack of situational awareness creates dangerous situation	M	Attach safety to anchor when closer than a 'body's length' from the edge of a hazard Pay attention to objective and subjective hazards; do not let something surprise you Just because a task is routine DO NOT GET COMPLACENT – DO THE RIGHT THING EVERY TIME Speak up; if someone is doing something that does not look right	L	Follow established safety procedures and guidelines	All enforce this standard	

			or feel right say something even if they are 'more experienced' than you				
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i> <input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK: Demonstrate mountain walking techniques.			2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY								
a. LAST NAME			b. RANK		c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Movement up hill	Strains, sprains, injury from slip or falls	M	Demonstrate and practice proper mountain walking technique early in the movement	L	Instructor present 699-9013: Demonstrate mountain walking techniques	Squad instructor		
	Injury from rock fall		Situational awareness by all group members; Group stays close together, avoid climbing above/below another Soldier; Yell 'ROCK' to warn others of an immediate hazard		Instructor leads students; buddy squads stay together	Squad instructor		
	Dehydration		Carry minimum of 2 quarts of water; ability to filter water or melt and boil snow for water for longer movements; get water when it is available not when you are out of water		Discuss water re-supply considerations during class; walk one hour, five minute water break	Squad instructor		
	Ice axe injuries		Carry ice axe in proper position for terrain		Part of class; Instructors enforce proper procedure during the movement	Squad instructor		

Movement downhill	Slips, Falls, Leg injuries, rock fall	M	Demonstrate and practice proper descent techniques. Slow descent rate.	L	Instructor leads descent	Squad instructor	
Movement	Weather	?	Check weather forecast prior to movement; adjust clothing/equipment requirements as required	?	OIC/NCOIC provide weather report; modify route/route length as required	OIC/NCOIC	
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>) <input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK: Demonstrate basic rock climbing techniques			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Bouldering	Falls	M	Climb IAW 699-9018 Wear helmet with chinstrap fastened Remove watches and rings prior to climbing Clean boot soles prior to climbing Test handhold/foot placements for sound rock Use spotter – instructor demonstrates proper spotting technique Do not climb above effective range of spotter (about head height)	L	Instructor presents 699-9018: Demonstrate basic rock climbing techniques	Squad instructor	
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>) <div style="display: flex; justify-content: space-around; align-items: center;"> <div><input checked="" type="checkbox"/> LOW</div> <div><input type="checkbox"/> MODERATE</div> <div><input type="checkbox"/> HIGH</div> <div><input type="checkbox"/> EXTREMELY HIGH</div> </div>							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Demonstrate a basic top belay			2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY								
a. LAST NAME			b. RANK		c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Belay	Incorrect procedure results in a fall	M	Belay IAW 699-9020 Use proper belay technique for the situation/terrain Use proper commands to communicate with the climber Squad instructor inspects belayer and reviews procedures prior to climber climbing	L	Instructor presents 699-9020: Demonstrate a basic top belay Rehearse procedures on Class 1 terrain before using on Class 3-5 terrain	OIC/NCOIC Squad instructors Medics		
Climb	Failure to tie-in correctly results in a fall	M	Climb IAW 699-9020 Use proper commands to communicate with belayer Squad instructor inspects climber prior to climbing		Same as above	Squad instructors		
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>)								
<input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH								
14. RISK DECISION AUTHORITY								
a. LAST NAME			b. RANK		c. DUTY POSITION		d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Install a fixed rope			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Install fixed rope	Fall during installation	M	Install IAW 699-9027 For training, install fixed rope on Class 3 terrain with no exposure/low consequences Belay lead climber (the individual installing the fixed rope) on 4 th /5 th class terrain Install a primary and independent back-up anchor for each installation. Two equalized bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor Squad instructor selects route and inspects climber prior to installing fixed rope Squad instructor inspects and moves on installation prior to use	L	Instructor presents 699-9027: Install a fixed rope Rehearse procedures on Class 3 terrain prior to installation/movement on 4 th /5 th class terrain	Squad instructor	
Move on a fixed rope	Fall due to incorrect movement procedures	M	Move IAW 699-9027 Squad instructor inspects climber prior to movement on a fixed rope	L	Rehearse procedures on Class 3 terrain prior to installation/movement on 4 th /5 th class	Squad instructor	

					terrain		
Move on a fixed rope with intermediate anchors	Fall due to incorrect movement procedures	M	Squad instructor inspects climber prior to movement on a fixed rope	L	Rehearse procedures on Class 3 terrain prior to installation/movement on 4 th /5 th class terrain	Squad instructor	
Recover fixed rope	Fall during recovery	M	Establish a top belay for last man Squad instructor inspects belayer and climber prior to movement	L	Rehearse procedures on Class 3 terrain prior to installation/movement on 4 th /5 th class terrain	Squad instructor	
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>) <input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Rappel			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Install a rappel	Severe Falls	M	Install IAW 699-9029 All personnel that are working within a 'bodies length' from the edge MUST use safety arm to a bombproof anchor Terrain selection by squad instructor Rehearsals for installation and all movement techniques on easy, low consequence ground.	L	Instructor presents 699-9029: Rappel Squad instructor inspects installation prior to use.	Squad instructor	
Hasty Rappel	Falls	M	Rappel IAW 699-9029 Instruction on capabilities and limitations of this technique – use on moderate terrain only	L	Instructor presents 699-9029: Rappel Squad instructors inspects Soldier prior to rappel	Squad instructor	
Body Rappel	Severe Falls	M	Rappel IAW 699-9029 Instruction on capabilities and limitations of this technique – never use on overhanging terrain only	L	Instructor presents 699-9029: Rappel Squad instructors inspects Soldier prior to rappel	Squad instructor	

Carabiner Rappel	Severe Falls	M	Rappel IAW 699-9029 Instruction on capabilities and limitations of this technique Use of Fireman's belay for inexperienced personnel. Use of Autoblock to control descent	L	Instructor presents 699-9029: Rappel Squad instructors inspects Soldier prior to rappel	Squad instructor	
Retrieve rappel	Severe Falls	M	Retrieve IAW 699-9029 Select one bombproof anchor and leave minimum gear behind Clear all knots on doubled rope Check and re-check system prior to rappelling Warn others of falling rope prior as rope is pulled Never re-use webbing that has been burned after pulling the rope		Instructor presents 699-9029: Rappel Squad instructors inspects Soldier prior to rappel		
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>) <div style="display: flex; justify-content: space-around; align-items: center;"> <div><input checked="" type="checkbox"/> LOW</div> <div><input type="checkbox"/> MODERATE</div> <div><input type="checkbox"/> HIGH</div> <div><input type="checkbox"/> EXTREMELY HIGH</div> </div>							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK: Install a one rope bridge			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Install a one rope bridge	Severe Falls	M	<p>Install IAW 699-9031</p> <p>Select a good crossing site:</p> <p>Discuss distance span capabilities and limitations of ropes. Discuss loading/unloading platforms. Look for suitable anchors for the installation.</p> <p>All personnel that are working within a 'bodies length' from the edge MUST use safety arm to a bombproof anchor</p> <p>Install a back-up dynamic rope.</p> <p>Install a primary and independent back-up anchor for each installation. Two equalized bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor</p>	L	<p>Instructor presents 699-9031: Install a one rope bridge</p> <p>Squad instructor inspects and rides installation prior to use by students</p>	Squad instructor	
Cross a one rope bridge	Severe Falls	M	Cross IAW 699-9031	L	<p>Instructor presents 699-9031: Install a one rope bridge</p> <p>Squad instructor</p>	Squad instructor	

					inspects students prior to movement		
Recover a one rope bridge	Severe Fall	M	Use techniques appropriate to the terrain to protect the last man during movement (i.e. rappels or belays)		Instructor presents 699-9031: Install a one rope bridge Squad instructor inspects students prior to movement		
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>) <input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Demonstrate basic rock climbing technique using a top rope			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Prepare to top rope climb	Failure to prepare correctly results in fall	M	Prepare IAW 699-9021 Climber and belayer inspect each other before climbing Harness tied to standard Both personnel tied into climbing rope to standard Watches and rings removed Helmet worn	L	Instructor presents 699-9021: Demonstrate basic rock climbing technique using a top rope Squad instructor inspects belayer and climber after belayer signals 'BELAY ON'	Squad instructor	
Conduct a top rope climb	Severe Fall	M	Conduct climb IAW 699-9021 Climber and belayer use standard commands to communicate during the exercise Belayer manages the rope properly Climber does not out climb the belayer (create slack)	L	Squad instructor monitors belayer and climber throughout the exercise	Squad instructor	
Install a top rope	Severe Fall	H	Install top rope IAW 699-9024: Rig top ropes Install a primary and independent	L	One primary instructor installs top rope. Training and Standards civilian	Squad instructor NCOIC/OIC	

			back-up anchor for each installation. Two bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor		inspects installation prior to use.	Training and Standards	
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>							
<input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK: Ascend a fixed rope on a vertical or overhanging obstacle			2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY								
a. LAST NAME			b. RANK		c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Ascend the rope	Falls	M	Rig for ascent IAW 699-9035 Use a minimum of three wraps on all prusiks Do not lock upper and lower friction knots together during ascent. Tie in short every 10-15 feet (dynamic rope only)	L	Instructor presents 699-9035: Ascend a fixed rope on a vertical or overhanging obstacle Instructor inspects all students prior to movement	Squad instructor		
	Rock fall	M	Wear helmet. Instructor cleans pitch prior to students climbing.	L	Instructor responsibility prior to use of installation	Squad instructor		
Install fixed rope	Falls	M	Install IAW 699-9028: Install a fixed rope with intermediate anchors Install a primary and independent back-up anchor for each installation. Two bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor	L	One primary instructor installs top rope. Training and Standards civilian inspects installation prior to use.	Squad instructor NCOIC/OIC Training and Standards		

Additional space for entries in Items 5 through 11 is provided on Page 2.

13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>			
<input checked="checked" type="checkbox"/> LOW	<input type="checkbox"/> MODERATE	<input type="checkbox"/> HIGH	<input type="checkbox"/> EXTREMELY HIGH
14. RISK DECISION AUTHORITY			
a. LAST NAME	b. RANK	c. DUTY POSITION	d. SIGNATURE

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Install a suspension traverse			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Install a suspension traverse	Installation failure, Falls, Damaged equipment	M	Rig installation IAW Student Handout, 699-9032	L	Instructor presents 699-9032: Install a suspension traverse Squad instructor inspect and ride installation prior to use by students	Squad Instructor	
Move personnel or equipment on a suspension traverse	Installation failure, Falls, Damaged equipment	M	Ride installation IAW Student Handout, 699-9032	L	Squad instructor inspects students and/or equipment prior to movement on the installation	Squad instructor	
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (Check one)							
<input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Evacuate a casualty in low angle mountain terrain			2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY								
a. LAST NAME			b. RANK		c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Raise a litter patient on low angle terrain (3 rd class)	Falls, loss of control of patient	M	<p>Raise patient IAW 699-9037: Evacuate a casualty in low angle mountain terrain</p> <p>One NCOIC, Belay established, litter bearers manage p/t, belayer manages rope to protect p/t</p> <p>Use dummy or rucksacks to simulate patient.</p> <p>Install a primary and independent back-up anchor for each installation. Two bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor</p>	L	<p>Instructor presents 699-9037</p> <p>One person in charge of the exercise</p> <p>Situational awareness by all participants</p> <p>Instructor inspect rigging prior to movement</p>	<p>Squad instructor</p> <p>Medics inspect casualty rigging prior to movement</p>		
Lower a litter patient on low angle terrain (3 rd class)	Fall, loss of control of patient	M	<p>Lower patient IAW 699-9037: Evacuate a casualty in low angle mountain terrain</p> <p>One NCOIC, Belay established, litter bearers manage p/t, belayer manages rope to protect p/t</p> <p>Use dummy or rucksacks to simulate patient.</p>	L	<p>Instructor presents 699-9037</p> <p>One person in charge of the exercise</p> <p>Situational awareness by all participants</p>	<p>Squad instructor</p> <p>Medics inspect casualty rigging prior to movement</p>		

			Install a primary and independent back-up anchor for each installation. Two bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor		Instructor inspect rigging prior to movement		
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>							
<input type="checkbox"/> LOW <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Evacuate a casualty high angle mountain terrain			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Raise a casualty on high angle terrain	Dropped patient, rock fall	M	Raise casualty IAW 699-9040 Evacuate a casualty in high angle mountain terrain Install a primary and independent back-up anchor for each installation. Two bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor	L	Instructor presents 699-9040 One person in charge of the exercise Situational awareness by all participants Medic inspects casualty rigging Squad instructor inspects systems prior to use	OIC/NCOIC Medic NCOIC Medics Squad instructor	
Lower a casualty on high angle terrain	Dropped patient, rock fall	M	Lower casualty IAW 699-9040 Evacuate a casualty in high angle mountain terrain Install a primary and independent back-up anchor for each installation. Two bolts, three artificial equalized points, or a bombproof natural anchor constitutes one anchor	L	Instructor presents 699-9040 One person in charge of the exercise Situational awareness by all participants	OIC/NCOIC Medic NCOIC Medics Squad instructor	

					Medic inspects casualty rigging		
					Squad instructor inspects systems prior to use		
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>							
<input checked="" type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Move on gentle, moderate and steep snow and ice			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Move on gentle to moderate slopes	Injuries from slips and falls	M	Begin training in areas with safe run-outs and low consequences Train this sub-task in conjunction with self-arrest Crampons worn as conditions require (glacial ice, alpine ice, water ice)	L	Squad instructor present 699-9034: Move on gentle, moderate and steep snow and ice Squad instructor select terrain	Squad instructor	
Self-Arrest	Unable to arrest the fall; sprains, strains etc.	M	Always train in areas with safe run-outs/low consequences Do not use crampons in training; keep feet up if crampons are worn in actual self-arrest situation to prevent a cart wheeling fall and/or broken leg Understand the capabilities and limitations of self-arrest – do not conduct on bare ice, above crevasses etc.	L	Squad instructor present 699-9034 Squad instructor controls movement	Squad instructor	

Descend gentle to moderate snow slopes	Injuries from slips and falls	M	Descend slowly and in control	L	Squad instructor present 699-9034		
Glissade			Not authorized during BMC Remove crampons before glissading Glissade only where there is a safe run-out Complete self-arrest training prior to any glissading		For instructor training only Senior personnel select area for training Squad instructor controls movement	Squad instructor	
Use crampons and ice axe	Injury from slips and falls	M	Use crampons and ice axe IAW 699-9034	L	Squad instructor present 699-9034 Squad instructor controls movement	Squad instructor	
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i> <div style="display: flex; justify-content: space-around; align-items: center;"> <div><input checked="" type="checkbox"/> LOW</div> <div><input type="checkbox"/> MODERATE</div> <div><input type="checkbox"/> HIGH</div> <div><input type="checkbox"/> EXTREMELY HIGH</div> </div>							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Cross a mountain stream			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Preparation	Drowning	H	<p>Prepare for stream crossing:</p> <p>Trousers un-bloused Shirts untucked Pockets buttoned LBV unbuckled Rucks worn high, waist and chest straps unbuckled Boots worn helmet with chinstrap fastened</p> <p>Train all on procedures for swimming in a swift stream – jettison equipment, on your back, feet down stream and together, use arms to keep head above water and steer towards shore moving with the current GET OUT OF THE WATER AS FAST AS YOU CAN</p>	M	<p>Senior instructor present 699-9033; serves as site NCOIC</p> <p>Student to instructor ratio is no more than 6:1</p> <p>Squad instructor inspects all students after preparation</p> <p>Safety line installed down stream</p> <p>Two strong swimmers with PFDs and throw bags positioned down stream</p> <p>Upstream look-out stationed with radio to alert NCOIC to dangerous debris</p> <p>All students and instructors wear</p>	<p>OIC/NCOIC</p> <p>Squad instructors</p> <p>Medics</p>	

					PFDs		
Individual crossing	Drowning	H	Maximum water depth at crossing site is below knee level Consider flow rate with crossing depth	M	NCOIC controls movement – one student at a time	OIC/NCOIC Squad instructors Medics	
Team Crossing	Drowning	H	Maximum water depth at crossing site is no more than mid- thigh deep Consider flow rate with crossing depth	M	NCOIC controls movement - one team at a time	OIC/NCOIC Squad instructors Medics	
Hand-line crossing	Drowning	H	Maximum water depth at crossing site is no more than waist deep	M	NCOIC controls movement - one student at a time	OIC/NCOIC Squad instructors Medics	
	Hypothermia	H	Change of clothing and/or warm shelter available at completion of training	M	Heated ambulance on site for duration of exercise	Medic NCOIC	
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>)							
<input type="checkbox"/> LOW <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK	c. DUTY POSITION			d. SIGNATURE	

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK : Move on glaciated terrain as a rope team			2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED (YYYYMMDD)		
4. PREPARED BY							
a. LAST NAME			b. RANK	c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Movement	Crevasse falls	H	Move IAW 699-9036: Move on glaciated terrain as a rope team Rope team movement controlled by an instructor Begin in a known safe area Belay in/out of known safe areas Keep rope reasonably tight at all times Cross crevasses at right angles Use echelon technique when moving parallel to crevasses Avoid ice mills (moulins) Wear helmet	M	Instructor presents 699-9036 BMC students will not move above firn line or Gabriel Ice Falls Students remain roped on the glacier at all times	Squad instructor	
Crevasse rescue	Injury from long falls	H	Select a crevasse that bottoms out or neck's down to a point too narrow for a person to fit through for training Squad instructors serve as 'victims' – never students	M	Squad instructors work in buddy rope teams to conduct training – one instructor remains top side		

			Use 3 equalized ice screws OR 3 equalized pickets OR 2 deaman anchors for rescue systems				
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>							
<input type="checkbox"/> LOW		<input checked="" type="checkbox"/> MODERATE		<input type="checkbox"/> HIGH		<input type="checkbox"/> EXTREMELY HIGH	
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

Appendix A: Planning Considerations for Mountain Training and Operations

Class 1 and 2 Terrain	
Area of Consideration	Special Requirements and Recommended Actions
Available Personal Clothing and Equipment	<ul style="list-style-type: none"> Refer to Appendix B: Planning Considerations for Cold Weather Training Operations UV protection for skin and eyes
Training	<ul style="list-style-type: none"> Knowledge of cold weather environmental hazards Knowledge of cold weather clothing capabilities and limitations Skill to use cold weather clothing and equipment to provide protection from the elements Skill to prevent, recognize and treat cold weather injuries Skills to prevent, recognize and treat altitude illness Knowledge of communication capabilities and limitations Knowledge of mountain bivouac techniques Knowledge of weapons employment in mountain terrain direct and indirect Physical conditioning MUST be a priority prior to mountain operations Basic Mountaineering Training recommended (Level 1 Military Mountaineering IAW FM 3-97.6 <i>Mountain Operations</i>, and FM 3-97.61 <i>Military Mountaineering</i>)
Food and Water	<ul style="list-style-type: none"> MREs or MCWs as weather dictates (4,500 – 6,000 calories per day) 3.5-5 quarts of water per day
Shelter and Heat	<p>Mission, terrain and weather dependent, consider:</p> <ul style="list-style-type: none"> Patrol Bag GORE-TEX® bivouac cover sleeping mat poncho poncho liner (optional)
Special Equipment	<ul style="list-style-type: none"> Water filter (Recommend: First Need Portable Water Filter) SKEDCO or UT2000 for CASEVAC
Additional Mission Considerations and Limitations	<ul style="list-style-type: none"> Decentralized operations preferred Vehicles and mechanized forces restricted to roads/trails Consider air assets available and effects of terrain weather Consider fire support capabilities and limitations – organic fire support assets may be the only means available Consider communications capabilities and limitations and how this effects mission – are additional assets available from higher headquarters Consider medical treatment and evacuation plan

Appendix A: Planning Considerations for Mountain Training and Operations

Class 3-5 Terrain	
Area of Consideration	Special Requirements and Recommended Actions
Available Personal Clothing and Equipment	<ul style="list-style-type: none"> Refer to Appendix B: Planning Considerations for Cold Weather Training Operations UV protection for skin and eyes
Training	<ul style="list-style-type: none"> Physical conditioning MUST be a priority prior to mountain operations Basic Mountaineering Training highly recommended (Level 1 Military Mountaineering IAW FM 3-97.6 <i>Mountain Operations</i>, and FM 3-97.61 <i>Military Mountaineering</i>) Advanced Mountain Training highly recommended (Level 2/3 Military Mountaineering IAW FM 3-97.61) for at least one member of each company
Food and Water	<ul style="list-style-type: none"> MREs or MCWs as weather dictates (4,500 – 6,000 calories per day) 3.5-5 quarts of water per day
Shelter and Heat	<p>Mission, terrain and weather dependent, consider:</p> <ul style="list-style-type: none"> Patrol Bag GORE-TEX® bivouac cover sleeping mat poncho poncho liner (optional)
Special Equipment	<ul style="list-style-type: none"> Water filter (Recommend: First Need Portable Water Filter) SKEDCO or UT2000 for CASEVAC Per squad: 1 static rope and 1 dynamic rope Per individual: 1 seat harness (30' piece of 1 inch tubular nylon webbing); 1 each 10' piece of webbing; 1 each 6' piece of webbing; 1 each 6' and 12' piece of 7mm cord; 3-4 oval carabiners; 1 pear shaped locking carabiner
Additional Mission Considerations and Limitations	<ul style="list-style-type: none"> Decentralized operations preferred – company sized or smaller should be the norm Vehicles and mechanized forces restricted to roads/trails Consider air assets available and effects of terrain weather Consider fire support capabilities and limitations – organic fire support assets may be the only means available Consider communications capabilities and limitations and how this effects mission – are additional assets available from higher headquarters Consider medical treatment and evacuation plan

Appendix B: Planning Considerations for Cold Weather Training and Operations

Temperature Zone 1: 39° to 20° F Wet Cold

Area of Consideration	Special Requirements and Recommended Actions		
Available Personal Clothing and Equipment	Clothing Layer:	ECWCS Generation II	ECWCS Generation III
	Base Layer	<ul style="list-style-type: none">Lightweight polypropylene top and bottom and/orMid-weight polypropylene top and bottom	<ul style="list-style-type: none">Lightweight cold weather undershirt and drawers and/orMid-weight cold weather shirt/drawers
	Insulating Layer	<ul style="list-style-type: none">Shirt, cold weather, black fleece and/orLiner, cold weather, coat	<ul style="list-style-type: none">Green fleece jacket
	Outer Shell	<ul style="list-style-type: none">Generation II GORE-TEX® jacket andGeneration II GORE-TEX® trousers	<ul style="list-style-type: none">Wind cold weather jacket (Wind Shirt)Extreme cold/wet weather jacket (Hard Shell)Extreme cold/wet weather trousers (Hard Shell)
	Other: <ul style="list-style-type: none">SuspendersIssued Wool Socks w/ synthetic liner sockTemperate Boots; cold weather boots recommended (e.g. Belleville 795, Danner Ft. Lewis 400g Tan Military Boots)		<ul style="list-style-type: none">Balaclava and neck gaiterIssued GORE-TEX® gloves with linersKnifeArctic necklace (lighter and chap-stick worn around neck)
Training	<ul style="list-style-type: none">Knowledge of cold weather environmental hazardsKnowledge of cold weather clothing capabilities and limitationsSkill to use cold weather clothing and equipment to provide protection from the elementsSkill to prevent, recognize and treat cold weather injuriesCWIC is required for all personnel		
Food and Water	<ul style="list-style-type: none">MREs1 hot meal daily as mission dictates3.5-5 quarts of water per day		
Shelter and Heat	<ul style="list-style-type: none">Patrol BagGORE-TEX® bivouac coversleeping matponchoponcho liner (optional)		
Additional Control Measures	<ul style="list-style-type: none">water re-supply plansanitation plan		

Appendix B: Planning Considerations for Cold Weather Training and Operations

Temperature Zone 2: 19° to -4° F Dry Cold

Area of Consideration	Special Requirements and Recommended Actions		
Available Personal Clothing and Equipment	Clothing Layer:	ECWCS Generation II	ECWCS Generation III
	Base Layer	<ul style="list-style-type: none"> • Polypropylene undershirt and drawers • Drawers cold weather, polyester, brown lightweight undershirt and drawers 	<ul style="list-style-type: none"> • Lightweight cold weather undershirt and drawers • Mid-weight cold weather shirt/drawers
	Insulating Layer	<ul style="list-style-type: none"> • Shirt and overalls, cold weather, black fleece and/or • Liner, cold weather, coat and trousers 	<ul style="list-style-type: none"> • Green fleece jacket
	Outer Shell	<ul style="list-style-type: none"> • Generation II GORE-TEX® jacket and • Generation II GORE-TEX® trousers 	<ul style="list-style-type: none"> • Wind cold weather jacket (Wind Shirt) • Extreme cold/wet weather jacket (Hard Shell) • Extreme cold/wet weather trousers (Hard Shell) • Extreme cold weather parka (Puffy Jacket)
	Other: <ul style="list-style-type: none"> • Suspenders • Issued Wool Socks w/ synthetic liner sock • Cold Weather Boots (e.g. Belleville 795, Danner Ft. Lewis 400g Tan Military Boots) • Balaclava and neck gaiter • Contact Gloves 		
Training	<ul style="list-style-type: none"> • CWIC required for all personnel 		
Food and Water	<ul style="list-style-type: none"> • Meal, Cold Weather (MCW) 1 bag = 1 meal which provides about 1500 calories • 34 ounces of heated water are required to hydrate one MCW • 2 hot meals per day as mission dictates 	<ul style="list-style-type: none"> • 3.5-5 quarts of water per day • 1 stove per team; Recommend MSR Whisperlite Internationale or MSR XGK-EX to heat water for rations and/or melt snow for water 	
Shelter and Heat	Individual: <ul style="list-style-type: none"> • MSS, all components • sleeping mat, poncho and poncho liner 	Squad: <ul style="list-style-type: none"> • Ahkio Group complete IAW Appendix E • Arctic 10-man tent • Space Heater Arctic 	
Additional Control Measures	<ul style="list-style-type: none"> • Begin leader/medic checks for cold weather injuries; 2-3 times daily at minimum • water re-supply and storage plan (to prevent water from freezing) • Sanitation plan • No skin camouflage below 32 degrees F 	<ul style="list-style-type: none"> • Contact gloves must be worn when working outdoors • POL gloves must be worn when working with fuel • Consider 4 season, 2-4 man shelters for personnel that work away from support base • Soft Shell available for lower end of temperature range 	

Appendix B: Planning Considerations for Cold Weather Training and Operations

Temperature Zone 3: -5° to -25° F Intense Cold

Area of Consideration	Special Requirements and Recommended Actions		
Available Personal Clothing and Equipment	Clothing Layer:	ECWCS Generation II	ECWCS Generation III
	Base Layer	<ul style="list-style-type: none">• Polypropylene undershirt and drawers• Drawers cold weather, polyester, brown lightweight undershirt and drawers	<ul style="list-style-type: none">• Lightweight cold weather undershirt and drawers• Mid-weight cold weather shirt/drawers
	Insulating Layer	<ul style="list-style-type: none">• Shirt and overalls, cold weather, black fleece and/or• Liner, cold weather, coat and trousers	<ul style="list-style-type: none">• Green fleece jacket
	Outer Shell	<ul style="list-style-type: none">• Generation II GORE-TEX® jacket and• Generation II GORE-TEX® trousers	<ul style="list-style-type: none">• Wind cold weather jacket (Wind Shirt)• Soft shell cold weather jacket (Soft Shell)• Soft shell cold weather trousers (Soft Shell)• Extreme cold weather parka (Puffy Jacket)• Extreme cold weather trousers (Puffy pants)
	Other: <ul style="list-style-type: none">• Suspenders• Issued Wool Socks w/ synthetic liner sock• Cold Weather Boots (e.g. Belleville 795, Danner Ft. Lewis 400g Tan Military Boot) for short duration outdoor work• White Vapor Barrier Boots• Balaclava and neck gaiter		<ul style="list-style-type: none">• Contact Gloves• Issued GORE-TEX® gloves with liners• Trigger Finger Mittens w/ extra TF liners• Arctic Mittens• Knife• Arctic necklace (lighter and chap-stick worn around neck)• Ski goggles
Training	<ul style="list-style-type: none">• CWIC required for all personnel		
Food and Water	<ul style="list-style-type: none">• Meal, Cold Weather (MCW) 1 bag = 1 meal which provides about 1500 calories• 34 ounces of heated water are required to hydrate one MCW• 2 hot meals per day as mission dictates	<ul style="list-style-type: none">• 3.5-5 quarts of water per day• 1 stove per team; Recommend MSR Whisperlite Internationale or MSR XGK-EX to heat water for rations and/or melt snow for water	
Shelter and Heat	Individual: <ul style="list-style-type: none">• MSS, all components• sleeping mat, poncho and poncho liner	Squad: <ul style="list-style-type: none">• Ahkio Group complete IAW Appendix E• Arctic 10-man tent• Space Heater Arctic	
Additional Control Measures	Implement all control measures from Temperature Zone 2 and change/add: <ul style="list-style-type: none">• Increase frequency of leader/medic checks for cold weather injuries• Rotate Soldiers in static positions frequently		<ul style="list-style-type: none">• Warm tents and/or vehicles available for Soldiers• 4 season shelters for personnel that work away from support base are mandatory

Appendix B: Planning Considerations for Cold Weather Training and Operations

Temperature Zone 4: -25° to -40° F Extreme Cold

Area of Consideration	Special Requirements and Recommended Actions		
Available Personal Clothing and Equipment	Clothing Layer:	ECWCS Generation II	ECWCS Generation III
	Base Layer	<ul style="list-style-type: none">• Polypropylene undershirt and drawers• Drawers cold weather, polyester, brown lightweight undershirt and drawers	<ul style="list-style-type: none">• Lightweight cold weather undershirt and drawers• Mid-weight cold weather shirt/drawers
	Insulating Layer	<ul style="list-style-type: none">• Shirt and overalls, cold weather, black fleece and/or• Liner, cold weather, coat and trousers	<ul style="list-style-type: none">• Green fleece jacket
	Outer Shell	<ul style="list-style-type: none">• Generation II GORE-TEX® jacket• Generation II GORE-TEX® trousers	<ul style="list-style-type: none">• Wind cold weather jacket (Wind Shirt)• Soft shell cold weather jacket (Soft Shell)• Soft shell cold weather trousers (Soft Shell)• Extreme cold weather parka (Puffy Jacket)• Extreme cold weather trousers (Puffy pants)
	Other: <ul style="list-style-type: none">• Suspenders• Issued Wool Socks w/ synthetic liner sock• Cold Weather Boots (e.g. Belleville 795, Danner Ft. Lewis 400g Tan Military Boot) for short duration outdoor work• White Vapor Barrier Boots in the field• Balaclava and neck gaiter		<ul style="list-style-type: none">• Contact Gloves• Issued GORE-TEX® gloves with liners• Trigger Finger Mittens w/ extra TF liners• Arctic Mittens• Knife• Arctic necklace (lighter and chap-stick worn around neck)• Ski goggles
Training	<ul style="list-style-type: none">• CWIC required for all personnel		
Food and Water	<ul style="list-style-type: none">• Meal, Cold Weather (MCW) 1 bag = 1 meal which provides about 1500 calories• 34 ounces of heated water are required to hydrate one MCW• 2 hot meals per day as mission dictates	<ul style="list-style-type: none">• 3.5-5 quarts of water per day• 1 stove per team; Recommend MSR Whisperlite Internationale or MSR XGK-EX to heat water for rations and/or melt snow for water	
Shelter and Heat	Individual: <ul style="list-style-type: none">• MSS, all components• sleeping mat, poncho and poncho liner	Squad: <ul style="list-style-type: none">• Ahkio Group complete IAW Appendix E• Arctic 10-man tent• Space Heater Arctic	
Additional Control Measures	Implement all control measures from Temperature Zone 3 and change/add: <ul style="list-style-type: none">• Risk Level is high• Limit outdoor operations and training; close scrutiny of operations/training by leaders is required		<ul style="list-style-type: none">• Hourly leader/medic checks for cold weather injuries• Cover all exposed skin• Static duty not recommended

Appendix B: Planning Considerations for Cold Weather Training and Operations

Temperature Zone 5: Below -40° F Hazardous Cold			
Area of Consideration	Special Requirements and Recommended Actions		
Available Personal Clothing and Equipment	Clothing Layer:	ECWCS Generation II	ECWCS Generation III
	Base Layer	<ul style="list-style-type: none"> • Polypropylene undershirt and drawers • Drawers cold weather, polyester, brown lightweight undershirt and drawers 	<ul style="list-style-type: none"> • Lightweight cold weather undershirt and drawers and/or • Mid-weight cold weather shirt/drawers
	Insulating Layer	<ul style="list-style-type: none"> • Shirt and overalls, cold weather, black fleece and/or • Liner, cold weather, coat and trousers 	<ul style="list-style-type: none"> • Green fleece jacket
	Outer Shell	<ul style="list-style-type: none"> • Generation II GORE-TEX® jacket and • Generation II GORE-TEX® trousers 	<ul style="list-style-type: none"> • Wind cold weather jacket (Wind Shirt) • Soft shell cold weather jacket (Soft Shell) • Soft shell cold weather trousers (Soft Shell) • Extreme cold weather parka (Puffy Jacket) • Extreme cold weather trousers (Puffy pants)
	Other: <ul style="list-style-type: none"> • Suspenders • Issued Wool Socks w/ synthetic liner sock • Cold Weather Boots (e.g. Belleville 795, Danner Ft. Lewis 400g Tan Military Boot) for short duration outdoor work • White Vapor Barrier Boots in the field • Balaclava and neck gaiter 		
Training	<ul style="list-style-type: none"> • CWIC required for all personnel 		
Food and Water	<ul style="list-style-type: none"> • Meal, Cold Weather (MCW) 1 bag = 1 meal which provides about 1500 calories • 34 ounces of heated water are required to hydrate one MCW • 2 hot meals per day as mission dictates 	<ul style="list-style-type: none"> • 3.5-5 quarts of water per day • 1 stove per team; Recommend MSR Whisperlite Internationale or MSR XGK-EX to heat water for rations and/or melt snow for water 	
Shelter and Heat	Individual: <ul style="list-style-type: none"> • MSS, all components • sleeping mat, poncho and poncho liner 	Squad: <ul style="list-style-type: none"> • Ahkio Group complete IAW Appendix E • Arctic 10-man tent • Space Heater Arctic 	
Additional Control Measures	Implement all control measures from Temperature Zone 4 and change/add: <ul style="list-style-type: none"> • Risk level is extremely high 	<ul style="list-style-type: none"> • Limit outdoor operations and training to critical life support tasks only • Warm tents and/or vehicles mandatory for all personnel 	

Appendix C: Wind Chill Chart

Wind
Speed (mph)
↓

	Air Temperature (°F)																	
	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95

Wind speed based on measures at 33 feet height. If wind speed measured at ground level multiply by 1.5 to obtain wind speed at 33 feet and then utilize chart.

$$WCT (°F) = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where T is temperature (°F) and V is wind speed (mph)

RISK OF FROSTBITE (see times on chart below)

GREEN – LITTLE DANGER (frostbite occurs in >2 hours in dry, exposed skin)

YELLOW – INCREASED DANGER (frostbite could occur in 45 minutes or less in dry, exposed skin)

RED – GREAT DANGER (frostbite could occur in 5 minutes or less in dry, exposed skin)

Time to occurrence of frostbite in minutes or hours in the most susceptible 5% of personnel.


Wind
Speed (mph)
↓

↓	Air Temperature (°F)											
	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	>2h	>2h	>2h	>2h	31	22	17	14	12	11	9	8
10	>2h	>2h	>2h	28	19	15	12	10	9	7	7	6
15	>2h	>2h	33	20	15	12	9	8	7	6	5	4
20	>2h	>2h	23	16	12	9	8	8	6	5	4	4
25	>2h	42	19	13	10	8	7	6	5	4	4	3
30	>2h	28	16	12	9	7	6	5	4	4	3	3
35	>2h	23	14	10	8	6	5	4	4	3	3	2
40	>2h	20	13	9	7	6	5	4	3	3	2	2
45	>2h	18	12	8	7	5	4	4	3	3	2	2
50	>2h	16	11	8	6	5	4	3	3	2	2	2


WET SKIN COULD SIGNIFICANTLY DECREASE THE TIME FOR FROSTBITE TO OCCUR.

Appendix D: MEDEVAC REQUEST

USARAK 9-Line Medevac Request




9-Line MEDEVAC Request



1. Location of Pickup Site
2. Radio Frequency / Call Sign
3. Number of Patients by precedence:
 - A. Urgent
 - B. Urgent Surgery
 - C. Priority
 - D. Routine
 - E. Convenience
4. Special Equipment
 - A. None
 - B. Hoist
 - C. Extraction Equipment
 - D. Ventilator
5. # Patients by type
 - L. Litter
 - A. Ambulatory
6. Number and type of wounds


7. Method of Marking Pickup Site
 - A. VS-17 Panel
 - B. Pyro
 - C. Smoke
 - D. IR Light
 - E. None
8. Patient Nationality & Status
 - A. US Military
 - B. US Civilian
 - C. Foreign Military
 - D. Foreign Civilian
9. Terrain Description
 - Hills
 - Power Lines
 - Buildings
 - Landing Surface



ON FEDERAL TRAINING LANDS

(FWA, YTA, DTA, JBER, TFTA, etc)

1. Contact Range Control:



Primary FM 38.30


Secondary FM 40.50

Contingency 907-353-7535
2. Relay 9-Line MEDEVAC Request on the back of this card.
3. Contact Your Unit with SITREP.
4. Continue to provide medical care until MEDEVAC arrives or ground EVAC completed.

OFF FEDERAL TRAINING LANDS

(Parks HWY, Richardson HWY, Glenn HWY, etc)

1. Dial 911
2. Inform 911 Operator of the location and injuries.
(Refer to 9-Line)
3. Contact Your Unit with SITREP.
4. Continue to provide medical care until EMS or MEDEVAC arrives.



Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK			2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY								
a. LAST NAME			b. RANK		c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Additional space for entries in Items 5 through 11 is provided on Page 2.								
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>								
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH								
14. RISK DECISION AUTHORITY								
a. LAST NAME		b. RANK		c. DUTY POSITION			d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

1. MSN/TASK			2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY								
a. LAST NAME			b. RANK		c. POSITION			
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Additional space for entries in Items 5 through 11 is provided on Page 2.								
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>								
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH								
14. RISK DECISION AUTHORITY								
a. LAST NAME		b. RANK		c. DUTY POSITION			d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
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Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

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Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>)							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

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	Optimum	Adequate	Minimal
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OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
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Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
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Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
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Environmental Hazards	Dismounted Mobility Classification		
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Personnel Rest	Equipment Status		
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Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
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Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

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COMPOSITE RISK MANAGEMENT WORKSHEET

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4. PREPARED BY							
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5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>)							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

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Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
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Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK		2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY							
a. LAST NAME			b. RANK		c. POSITION		
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i> <input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK		2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
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a. LAST NAME			b. RANK		c. POSITION		
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>)							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

<i>Assessment Factors</i>	<i>Identify and Assess Hazards</i>	<i>Score</i>	<i>Risk Level</i>
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

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1. MSN/TASK		2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
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Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (<i>Check one</i>)							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

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Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

Risk Assessment Matrix for Mountain Operations

Use the risk assessment matrix and the risk assessment worksheet to help you complete Step 1 and 2 of the CRM process: identify and assess hazards. This allows you to make your initial risk assessment.

Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
Partially Acclimated	5	4	3
Acclimated	4	3	2

Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
Routine	4	3	2	5
Simple	3	2	1	4

Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
	< 8 hours	8-24 hours	24-72 hours	Over 72 hours
90 to 110	5	6	6	7
79 to 90	2	3	4	4
78 to 55	1	1	1	1
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
None Present	2	4	5
Present-avoidable	3	5	6
Unavoidable	5	6	7

Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
6 hours (in 24 hours)	2	3	4
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Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
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COMPOSITE RISK MANAGEMENT WORKSHEET

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1. MSN/TASK		2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
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Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

Risk Assessment Matrix for Mountain Operations

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Mission (Planning) SCORE:			
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/MOI/POI	1	2	3

Mission (Command and Control) SCORE:				
Leadership with mountain experience	Maneuver Element Size			
	Battalion	Company	Platoon	Squad
None	7	6	5	4
Basic Level	6	5	4	3
Advanced	5	4	3	2

Troops (Soldier Endurance) SCORE:			
Environmental Preparation	Fitness Level		
	Untrained	Proficient	Trained
Non-acclimated	6	5	4
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Mission and Troops (Troop to Task) SCORE:				
Task	Soldier Experience			
	Level 1	Level 2	Level 3	No mountain training/experience
Complex	5	4	3	6
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Weather SCORE:				
Temperature (degrees F with wind chill)	Exposure Duration			
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55 to 33	1	1	2	3
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Hazardous weather conditions (blizzard, whiteout, ice fog, snowstorm)	6	7	8	9

Terrain SCORE:			
Environmental Hazards	Dismounted Mobility Classification		
	Class 1-2	Class 3-4	Class 5
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Troops (Rest and Maintenance) SCORE:			
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hours (in 24 hours)	3	4	5
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>8 hours (in 24 hours)	1	2	3

Risk Assessment Worksheet for Mountain Operations

Assessment Factors	Identify and Assess Hazards	Score	Risk Level
Mission (Planning)			
Mission (Command and Control)			
Troops (Soldier Endurance)			
Mission and Troops (Troop to Task)			
Weather			
Terrain			
Troops (Rest and Maintenance)			
Additional Considerations			
Total Score: _____			
Initial Risk Level: _____			

Interpreting the Score: Use the cumulative score to determine the initial risk level. **CAVEAT: If any individual area (e.g. weather) receives a high or extremely high risk, the overall initial risk level is high or extremely even if the cumulative score indicates low or moderate risk level.**

Individual Area	1,2	3,4	5,6	7,8,9
Risk Level	Low risk	Moderate Risk	High Risk	Extremely High Risk
Cumulative Score	7 to 12	13 to 23	24 to 35	36 to 40

COMPOSITE RISK MANAGEMENT WORKSHEET

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Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED <i>(Check one)</i>							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

ITEMS 5 THROUGH 12 CONTINUED:							
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?